SHARPIN, Semen Andreyevich; VITVITSKIY, M., red.; BURKATOVSKAYA, TS., tekhn. red.

[Tables for calculating the wages of workers and office employees for vacation time or compensation for unused leave; revised to take into consideration the change in the price scale and substitution of the new currency] Tablitsy dlia ischisleniia srednego zarabotka rabochikh i sluzhashchikh za vremia otpuska, ili kompensatsii za neispol'zovannyi otpusk; pererabotany s uchetom izmeneniia masshtabe tsen i zamenoi obrashchaiushchikhsia deneg novymi den'gami. L'vov, knizhno-zhurnal'noe izd-vo, 1961. 142 p.

(MIRA 14:9)

(Wages--Tables and ready reckoners)

SUKHOMLINA, Z.I.; VITVITSKIY, M. [Vitvits'kyi, M.], red.; DOROSHENKO, M.,
    red.; NEDOVIZ, S., tekhn. red.

[Useful advice] Knyzhkovo-zhurnal'ne vyd-vo, 1961. 182 p.
                                        (MIRA 14:10)

        (Cookery)   (House furnishings)

KARPENKO, G.V., red.; VITVITSKIY, M., red.

[Corrosion fatigue of metals; collection of reports]
Korrozionnaia ustalost' metallov; sbornik dokladov.
L'vov, Kameniar, 1964.   234 p.   (MIRA 18:11)

1. Vsesoyuznoye soveshchaniye po korrozionnoy ustalosti
metallov, Lvov, 1962. 2. Chlen-korrespondent AN Ukr.SSSR
i Institut mashinovedeniya i avtomatiki AN Ukr.SSR (for
Karpenko).

VITVITSKIY, N.K., Cand Tech Sci -- (diss) "Approximate method for determining the frequencies of natural bending, torsion, and joint oscillations of girders of variable cross-section." Tomsk, 1959, 12 pp (Min of Railway Transport USSR. Len Order of Lenin Inst of Engineers of Railroad Transport im Academician V.N. Obratsov) 120 copies (KL, 28-59, 126)

- 47 -

VITVITSKIY, N.K.

VITVITSKIY, N.K.

Approximate method for determining frequencies of natural bending, torsional, and joint vibration of bars with variable cross-sections. Trudy TEIIZHT 25:229-256 '58.   (MIRA 13:10)

1. Kafedra matematiki Tomskogo elektromekhanicheskogo instituta inzhenerov zheleznodorozhnogo transporta.
                    (Vibration)

VITVITSKIY, V. M., Cand Med Sci (diss) -- "The antimicrobal and therapeutic properties of combinations of certain antibiotics". Khar'kov, 1960. 12 pp (Khar'kov State Med Inst), 200 copies (KL, No 14, 1960, 136)

VITVITSKIY, N.K.

Determining the frequency of natural bending vibrations
of beams beyond the elasticity boundary in the presence
of plasticity zones. Trudy TEIIZHT 34:103-120 '62.
(MIRA 16:8)

VITVITSKIY, P.M. [Vytvyts'kyi, P.M.]; LEONOV, M.Ya.

Dislocation with an elliptical hollow. Dop.AN URSR no.3:
314-317 '60.   (MIRA 13:7)

1. Institut mashinovedeniya i avtomatiki AN USSR. Predstavleno
akademikom AN USSR G.N.Savinym [H.M.Savinym].
                    (Dislocations in crystals)

VITVYTSKIY, P.M.

29227

S/198/61/007/005/007/015
D274/D303

10.7600

AUTHORS: Vytvyts'kyy, P.M., and Leonov, M.Ya., (L'viv)

TITLE: On the fracture of a plate having a crack

PERIODICAL: Prykladna mekhanika, v. 7, no. 5, 1961, 516 - 520

TEXT: An infinite plate with a crack of length $2l$ (see Fig.) is under stresses, normal to the crack. Fracture occurs at the value σ_∞ of stress. It is assumed that the maximum normal stresses do not exceed a certain fixed value (the limit strength of the materi-al):

$$\sigma_{max} \leqslant \sigma_{ls};\qquad (1)$$

Hooke's law applies; if a stress-strain state occurs which does not comply with linear theory, nor with condition (1), then breaches (regions of weakened bonds) appear in the body; the effect of these breaches depends on the critical distance δ_{cr}. For an ideal brittle (amorphous) body, δ_{cr} is found from

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On the fracture of a plate ...

$$\delta_{cr} = \frac{2T}{\sigma_{ls}},\tag{2}$$

T being the surface energy of the material. For various materials, whose fracture is accompanied by microplastic deformations, the quantity δ_{cr} can be experimentally determined. In the above model, the breaches always occur (notwithstanding very small σ_{∞}), hence the fracture (crack) is enlarged (see Fig.), and

$$X_y(x, \pm 0) = 0; \quad Y_y(x, \pm 0) = \begin{cases} 0, & /x/ < l; \\ \sigma_{ls}, & l \leqslant /x/ < L. \end{cases}\tag{3}$$

The length 2L of the enlarged fracture is unknown; it has to be determined in accordance with (1). This problem is solved by N.I. Muskhelishvili's method (Ref. 2: Nekotoryye osnovnyye zadachi matematicheskoy teorii uprugosti, AN SSSR, 1954). After computations, one obtains

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On the fracture of a plate ...

$$L = l \sec \frac{\pi \sigma_{\infty}}{2\sigma_{ls}}. \tag{15}$$

Formulas for the stresses in the plate are derived, in particular, on the real axis, for $L < /x/ < \infty$, one obtains

$$Y_y = \sigma_{\infty} - \frac{2\sigma_{\pi ls}}{\pi} \text{arctg} \frac{\sqrt{L^2 - l^2}}{l^2 - x^2 - x\sqrt{x^2 - L^2}}; \tag{17}$$

$$X_x = -\frac{2\sigma_{\pi ls}}{\pi} \text{arctg} \frac{l\sqrt{L^2 - l^2}}{l^2 - x^2 - x\sqrt{x^2 - L^2}}; \quad X_y = 0.$$

For the quantity δ, which denotes the distance traversed by the points ($\pm l$, +0) and (+ l, -0) of opposite surfaces of the breach as a result of the deformation, one obtains

$$\delta = -\frac{8l}{\pi E} \sigma_{ls} \ln \cos \frac{\pi \sigma_{\infty}}{2\sigma_{ls}}. \tag{18}$$

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On the fracture of a plate ...

By the adopted model, these opposite surfaces will no longer inter-act if $\delta > \delta_{cr}$, hence the fracture increases. Thus, the critical stress σ_{cr} is such a value of σ_{∞} that $\delta = \delta_{cr}$. Hence (18) yields

$$\sigma_{cr} = \frac{2}{\pi} \sigma_{\ell s} \arccos \exp \left(- \frac{\pi E \delta_{cr}}{8 \ell \sigma_{\ell s}}\right). \tag{19}$$

For $\sigma_{cr} \ll \sigma_{\ell s}$,

$$\sigma_{cr} = \sqrt{\frac{E \sigma_{\ell s} \delta_{cr}}{\pi \ell}}. \tag{20}$$

For brittle materials, one obtains from (2) and (20) Griffith's formula:

$$\sigma_{cr} = \sqrt{\frac{2ET}{\pi \ell}}. \tag{21}$$

For $\ell \to 0$, formula (21) yields infinitely large σ_{cr}; this disad-

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On the fracture of a plate ...

vantage is not shared by formula (19) which yields (for $l \rightarrow 0$),
$\sigma_{cr} \rightarrow \sigma'_{l_s}$, i.e. the strength of plate with "zero" crack equals the
strength of a faultless plate. Griffith's results are also unsuita-
ble for very small cracks. Formulas (19) and (20) can also be used
for fracture processes accompanied by microplastic deformations.
Thereby, $\sigma_{l_s}\delta_{cr}$ (denoted by A) is the work expended on the forma-
tion of two surfaces of same area during the development of a
breach. Hence formulas (19) and (20) are written

$$\sigma_{cr} = \frac{2}{\pi}\sigma_{l_s} \text{ arccos } \exp\left(-\frac{\pi EA}{8l\sigma_{l_s}^2}\right), \qquad (22)$$

$$\sigma_{cr} = \sqrt{\frac{EA}{\pi l}} \qquad (\sigma_{cr} \ll \sigma_{l_s}). \qquad (23)$$

Formula (22), proposed by Orowan, remains valid for any σ_{cr}, even
if σ_{cr} is of the same order as σ_{l_s}. There are 1 figure and 5 refe-

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29227

On the fracture of a plate ...   S/198/61/007/005/007/015
D274/D303

rences: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to English-language publications read as follows: A.A. Griffith, Phenomena of rupture and flow in solids, Trans. Roy. Soc., A 221, London, 1920; E. Orowan, Energy criteria of fracture, Welding J., March 1955.

ASSOCIATION: Instytut mashynosnavstva i avtomatyky AN USSR (Institute of the Science of Machines and Automation AS Ukr-SSR)

SUBMITTED: June 10, 1960

Fig.
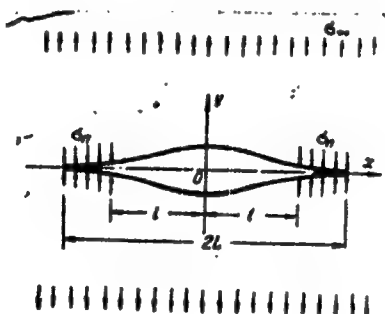
Card 6/6

42175
S/613/62/000/001/001/008
E061/E183

AUTHORS: Vitvitskiy, P.M., and Leonov, M.Ya.

TITLE: Slip bands in the heterogeneous deformation of
             a plate

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut
             mashynoznavstva i avtomatyky, L'viv. Voprosy mekhaniki
             real'nogo tverdogo tela. no. 1. Kiev, 1962, 13-28.

TEXT: The paper is a continuation of previous work
(M.Ya. Leonov, N.Yu. Shvayko, Zhurnal prikladnoy mekhaniki i
tekhnicheskoy fiziki, no.2, 1961. P.M. Vitvitskiy, M.Ya. Leonov,
DAN URSR, no.3, 1960. P.M. Vitvitskiy, M.Ya. Leonov, Prikladna
mekhanika, v.7, no.5, 1961). The problem of the elasto-plastic
deformation of a body may be reduced to the linearly elastic
problem of a material containing a distribution of dislocations.
In accordance with this concept, the plane stress state is
investigated in a thin plate containing a slit or a circular hole
and subjected to a stress system which at infinity becomes
$Y_y = p$ (tensile), $X_x = X_y = 0$. At a certain stress slip bands

Card 1/2

Slip bands in the heterogeneous ...   S/813/62/000/001/001/000
                                          E001/E163

develop;   the Muskhelishvili stress functions appropriate to the
region surrounding a circular hole are quoted, and the modified
functions applicable in the presence of distributed dislocations
are derived.   The problem of the elasto-plastic deformation of a
plate with a slit involves determining the distribution of
dislocations, and leads to an integral equation the solution of
which gives the conditions for the formation of slip bands.
Initially, the slip bands are parallel with the slit, but later,
bands develop which are inclined at an angle of about $50°$ to the
slit;   these findings agree with observations on soft steel plate.
An analogous treatment is applied to a plate containing a hole.
In this case a polynomial solution is found for the integral
equation, and by limiting the number of terms in the polynomial
the solution is evaluated approximately.
There are 6 figures and 1 table.

SUBMITTED: June 10, 1961

Card 2/2

2437

S/207/62/000/001/016/018
B104/B108

10.7100

AUTHORS: Vitvitskiy, P. M., Leonov, M. Ya. (L'vov)

TITLE: Extension beyond the elastic limit of a plate with circular
             opening

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 1,
             1962, 109 - 117

TEXT: Conditions are laid down under which the deformation of a body
beyond the elastic limit can be studied with the linear elastic theory
of the deformation of a body with linear dislocations distributed according
to a certain law. The distribution of these dislocations and the
dimensions of the region in which they occur are determined from the given
forces of the inelastic bonds and from the condition of conservation of
elasticity outside the inelastic deformations. On the basis of such a
model the stress in a thin infinitely long plate with a circular opening
(Fig. 1) subjected to forces p is studied. Stress and strain in the
complex plane which result only from the load are determined by the
functions

Card 1/3

Extension beyond the elastic limit...

$$\Phi^0(z) = \frac{1}{4} p\left(1 + 2\frac{R^2}{z^2}\right), \qquad \Psi^0(z) = \frac{1}{2} p\left(1 + \frac{R^2}{z^2} + 3\frac{R^4}{z^4}\right) \tag{1.1}.$$

That part of the stress produced by the dislocations is determined in such a way that in the regions of inelastic deformation the sum of the stresses produced by p and those produced by the dislocations fulfills the condition

$$Y_y^0(x, 0) + Y_y^s(x, 0) = \sigma_H = \text{const} \qquad (R < |x| < L) \tag{1.3}.$$

Some auxiliary problems about linear dislocations in the plane that are necessary for the present problem are investigated with reference to a paper by N. I. Muskhelishvili (Nekotoriye osnovyye zadachi matematicheskoy teorii uprugosti, Izd-vo AN SSSR, 1954). The integral equation

$$\int_R^L \left\{ \frac{t}{t^2 - x^2} + \frac{R^4}{t} \left[\frac{1}{R^2 x^2} + \frac{R^4(x^2 - t^2)}{x^3(t^2 x^2 - R^4)^2} + 4t^2 R^2 \frac{(t^2 - R^2)(x^2 - R^2)}{(t^2 x^2 - R^4)^3} \right] \right\} \mu(t)\, dt =$$

$$= \frac{1}{4D}\left[\sigma_H - \frac{1}{2} p\left(2 + \frac{R^2}{x^2} + 3\frac{R^4}{x^4}\right)\right] (R < |x| < L) \tag{3.2}$$

for the density $\mu(t)$ of the dislocation distribution is solved in the variables

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Extension beyond the elastic limit...   S/207/62/000/001/016/018
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$$\xi = \frac{x^2}{R^2}, \qquad \eta = \frac{l^2}{R^2}$$

$$\frac{L^2}{R^2} = \alpha, \qquad \mu(l) = \mu(R\sqrt{\eta}) = \mu_0(\eta)$$

by approximation:

$$\mu_0(\eta) \approx \frac{\sigma_n}{D} \sum_{n=0}^{m} a_n \eta^n \qquad (1 \leqslant \eta \leqslant \alpha)$$

(3.4).

α characterizes the length of the region of inelastic deformation. The dependence of the length l of the region of the inelastic deformation on the radius R is calculated as a function (Fig. 3). Finally, the critical load for brittle rupture of the plate is determined. There are 4 figures, 1 table, and 10 references: 9 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Griffith A. A., Phenomena of Rupture and Flow in Solids, Trans. Roy. Soc., A 221, London, 1920.

Card 3/8

VITVITSKIY, P.M.

10.7600   1327   4016

33751
S/021/62/000/002/006/010
D299/D304

AUTHORS: Vytvyts'kyy, P. M. and Leonov, M. Ya.

TITLE: Brittle fracture of plate with circular hole

PERIODICAL: Akademiya nauk UkrRSR. Dopovidi. no. 2, 1962, 174-178

TEXT: An infinite plate with a circular hole of radius R is sub-
jected to stresses which create (at infinity) the uni-axial stres-
ses state $Y_y^\infty = p$, $X_x^\infty = X_y^\infty = 0$. It is assumed that the material of
the plate corresponds to the simplified model of a brittle body
(Ref. 1: M. Ya. Leonov, Inform. byull., no. 1, VINITI AS SSSR,
1960, p. 16). According to this model, at first, cracks appear,
whose sides are attracted towards each other as long as the distan-
ce between them does not exceed a certain value δ (which is consi-
dered as a constant of the material); when this distance is rea-
ched, the interaction between the sides ceases and local fracture
occurs; the corresponding load is called critical. The component v
of the displacements, normal to the cracks, has a discontinuity

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$\lambda(x)$. The discontinuities are related to linear dislocations. Mus-khelishvili's function for a linear dislocation is

$$\Phi_1(z) = \Psi_1(z) = D\,\frac{\lambda}{z} \tag{4}$$

where $D = \dfrac{G}{\pi(1+\varkappa)}$; G is the shear modulus, $\varkappa = 3-4\nu$ (for plane strain) and $\varkappa = (3-\nu)/(1+\nu)$ – for plane stress. In the case of a pair of dislocations λ and $-\lambda$ which pass through the points t and $-t$ of the real axis, one obtains

$$\Phi_2(z) = -\,2D\,\frac{\lambda t}{z^2 - t^2}, \quad \Psi_2(z) = -\,4D\,\frac{\lambda t z^2}{(z^2 - t^2)^2} \tag{5}$$

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Brittle fracture of ...

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Further, Muskhelishvili's function for a pair of linear disloca-
tions in a plane with a hole is derived. The discontinuity is ex-
pressed by

$$v(x,+0) - v(x,-0) = \lambda(x) = \int_L^x \mu(t)dt \quad (R \leqslant |x| \leqslant L) \tag{8}$$

The function $\mu(t) = \lambda'(t)$ is called the density-distribution of
dislocations. After a change of variables (in particular $t^2/R^2 = \eta$,
$\mu(t) = \mu(R\sqrt{\eta}) = \mu_0(\eta)$), one obtains the integral equation for μ_0:

$$\int_1^\alpha \left[\frac{1}{\eta - \xi} + \frac{1}{\xi\eta} + \frac{\xi - \eta}{2\xi(\xi\eta-1)^2} + \frac{4(\eta-1)(\xi-1)}{(\xi\eta-1)^3} \right] \mu_0(\eta)d\eta +$$

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$$+ \frac{p}{4D} \left(2 + \frac{1}{\xi} + \frac{3}{\xi^2} \right) = \frac{\sigma_0}{2D}, \qquad 1 \leqslant \xi \leqslant \alpha \qquad (9)$$

The approximate solution of this equation is sought in the form of a polynomial with unknown coefficients a_n, viz.:

$$\mu_0(\eta) \approx \frac{\sigma_0}{D} \sum_{n=0}^{m} a_n \eta^n \quad (1 \leqslant \eta \leqslant \alpha) \qquad (10)$$

Substituting (10) in (9), one obtains

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$$\sum_{n=0}^{m} a_n J_n(\alpha, \xi) + \frac{p}{\sigma_0} f(\xi) \approx \frac{1}{2} \qquad (1 \leqslant \xi \leqslant \alpha) \qquad (11)$$

For (11) to hold, it is necessary that

$$\sum_{n=0}^{m} \alpha_n \alpha^n = 0 \qquad (13)$$

The quantity α, by which the length of the crack can be found:
$1 = R(\sqrt{\alpha} - 1)$, is determined by (13). The coefficients a_n are found
by means of a system of (m+1) equations. This system in conjunction

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Brittle fracture of ...

with (13), yields p/σ_0 (σ_0 being the constant stress between the sides of the cracks which attract each other). Thus, an approximate relationship is obtained between the length of the crack, the load and the dislocation density-distribution. The maximum distance between the crack sides is

$$\lambda(R) = \frac{\sigma_0}{D} R \sum_{n=0}^{m} \frac{a_n}{2n + 1} \left[1 - \left(\frac{L}{R}\right)^{2n+1} \right]$$

(14)

Plots of $1/R$ versus p/σ_0 and of $\lambda(R)D/R\sigma_0$ versus p/σ_0 are shown. These graphs are used for determining the critical load p_k at which fracture occurs. Depending on $\delta D/R\sigma_0$, the critical load varies between $\frac{1}{3}\sigma_0 \leqslant p_k \leqslant \sigma_0$. With a given constant δ, $(\delta D/\sigma_0)$ $p_k \rightarrow \frac{1}{3}\sigma_0$ with

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Brittle fracture of ...

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D299/D304

large R, and $p_k \to \sigma_0$, with $R \to 0$. There are 3 figures and 5 Soviet-bloc references.

ASSOCIATION: Instytut mashynoznavstva ta avtomatyky AN UkrRSR (Institute of the Science of Machines and Automation of the AS UkrRSR)

PRESENTED: by Academician H. M. Savin of the AS UkrRSR

SUBMITTED: June 22, 1961

Card 7/7

S/879/62/000/000/028/088
D234/D308

AUTHORS: Leonov, M. Ya., Vitvitskiy, P. M. and Yarema, S. Ya.
(L'vov)

TITLE: Theoretical and experimental investigation of elastic-plas-
tic deformations during the extension of a plate with a
slot

SOURCE: Teoriya plastin i obolochek; trudy II Vsesoyuznoy konfe-
rentsii, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo
AN USSR, 1962, 196-199

TEXT: The elastic-plastic deformation is reduced to the deforma-
tion of an ideal elastic body whose displacements are discontinuous
on certain surfaces. With the aid of this model the authors solve
the problem of an infinite plate with a slot, subject to forces
perpendicular to the slot. N. I. Muskhelishvili's method is used.
The critical load is found to be $\sqrt{(1 - 2/)}$ multiplied by critical
stress. The experiments, carried out on steel plates, gave results
coinciding with the theoretical data in the initial stages except
in the incubation period. There are 2 figures.
Card 1/1

S/020/63/148/003/010/037
B104/B186

AUTHORS: Leonov, M. Ya., Academician AS KirSSR, Vitvitskiy, P. M., Yarema, S. Ya.

TITLE: Gliding strips occurring due to the stretching of plates having crack-like concentrators.

TEXT: Thin plates (200·300 mm) made of soft sheet steel that has crack-like stress concentrators in a direction perpendicular to the concentrators produced by cutters are stretched. The gliding strips could be observed by eye. Four stages of deformation were estbalished: 1) A stage of incubation with no plastic deformation occurring; 2) the stage, which is characteristic of the first appearance of mat spots at the ends of the cracks; 3) the stage, which is characteristic of the appearance of gliding strips, 20 - 40 mm long, that start from the end of the crack and make an angle of $47 - 54^\circ$ with the axis of the concentrators; 4) the stage, which is characteristic of the simultaneous appearance of gliding strips at many spots combining into a gliding band. The results of an analytic investigation of the stages using

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Gliding strips occurring ...

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the method developed by N. I. Muskhelishvili (Nekotoryye osnovnyye zadachi matematicheskoy teorii uprugosti – Some basic problems of the mathematical theory of elasticity, M., 1954) show satisfactory agreement with experiment if an ideal plastic-elastic material is assumed. Deviations between the angle of the gliding bands and the load at which these occur are attributed to the finiteness of the width of these bands, and to the solidification of the deformed material in the vicinity of the crack ends. There are 4 figures.

SUBMITTED: February 5, 1962

Card 2/2

VITVITSKIY, V.M.; GODUN, V.M.; KIMEL'BLAT, M.A.

Change in the sensitivity of dysentery agents to some antibiotics in
Ivano-Frankovsk between 1958 and 1963. Antibiotiki 9 no.12:1108-1110
D '64.   (MIRA 18:7)

1. Kafedra mikrobiologii (zav. - prof. T.I.Ivanova) Ivano-Frankovskogo
meditsinskogo instituta i Ivano-Frankovskaya infektsionnaya klinicheskaya
bol'nitsa (glavnyy vrach Ye.I.Gulyayevskaya).

VITVITSKIY, V.M.

Sensitivity of bacteria from the Proteus group to various
antibiotics and their combinations. Antibiotiki 9 no.8:
744-748 Ag '64.   (MIRA 18:3)

1. Kafedra mikrobiologii (zav. - prof. T.I. Ivanova) Ivano-
Frankovskogo meditsinskogo instituta.

VITVITSKIY, V.M.

Adaptation of Proteus cultures to some antibiotics and their combinations. Antibiotiki 10 no. 10:908-913 O '65.

(MIRA 18:12)

1. Kafedra mikrobiologii (zav. - prof. T.I. Ivanova) Ivano-Frankovskogo meditsinskogo instituta. Submitted Nov. 2, 1964.

VITVITSKIY, Ye.V., inzh. (p.L'vov)

Tractor-mounted shrub cutter. Put' i put.khoz. 5 no.6:24-25
Je '61.   (MIRA 14:8)
                    (Railroads--Equipment and supplies)

VITYAZEV.P., inzh.

Maintenance sercicing of automobiles on conveyer lines. Avt.transp.
39 no.6:17-18 Je '61. (MIRA 14:7)
(Motor vehicles—Maintenance and repair)
(Assembly-line methods)

CHEPURIN, V., shofer (Moskva); LAVRENT'YEV, A., avtolyubitel' (Syktyvkar);
GRIGOR'YAN, V., shofer (Tbilisi); VASIL'YEV, A., inzh. po mekhanizatsii;
RADVOGIN, M. (Moskva); VITYAZEV, P., inzh. (Chelyabinsk); YAKOVLEV, N.
(Chirchik); VINOKUROV, A.; BUBLIK, T., shofer; LOKOT', I., avtoslesar'

Automobile drivers speak today. Izobr.i rats. no.9:9-11 S '62.
(MIRA 16:3)

1. "Sel'khoztekhnika", Chelyabinskaya obl. (for Vasil'yev). 2. Nachal'nik
tsekha Konservnogo zavoda, g.Temryuk Krasnodarskogo kraya (for
Vinokurov). 3. Konservnyy zavod, g. Temryuk Krasnodarskogo kraya (for
Bublik, Lokot').
(Automobile engineering—Technological innovations)

VITYAZEV, P., inzh.

Hydraulic apparatus for cold riveting of automobile frames. Avt. transp. 38 no. 5:52-53 My '60. (MIRA 14:2)

1. Chelyabinskoye avtoupravleniye.
(Rivets and riveting)
(Motor vehicles—Design and construction)

600

VITYAYEV, S818

1. UDOVENKO, V. V., VITYAYEV, S. I.

2. USSR (600)

"The Viscosity of the Ketones -- Organic Acids Systems, V," Zhur. Obshch. Khim., 9, No. 19, 1939. Laboratory of physical Chemistry, Central Asiatic State University. Received 8 April 1939.

9. Report U-1626, 11 Jan 1952.

VITYAYEVA, S.I.; MARKMAN, A.L.

Polarographic study of keto - enol isomerism on the example of
acetonylacetone. Dokl. AN Uz. SSR no.8:33-36 '57.   (MIRA 11:5)

1.Sredneaziatskiy politekhnicheskiy institut. Predstavleno chlenom-
korr. AN UzSSR I.P. TSukervanikom.
                    (Hexanedione) (Polarographic analysis)
                    (Isomerism)

VII [H4EVH, V.H.

ALEKSANDROVA-ZAORSKAYA, V.V.; ARNOL'D, V.S.; ADAMCHUK, V.A.; BARANSKIY,
     N.N.; BARDIN, I.P.; VASYUTIN, V.F.; LISYAZHNA, V.A.; GORDONOV,
     L.Sh.; DOLGOPOLOV, K.V.; ZENKOVA, Z.A.; NEMCHINOV, V.S.; OBRU-
     CHEV, V.V.; RYAZANTSEV, S.N.; SOKOLOV, A.V.; STEPANOV, P.N.;
     CHERDANTSEV, G.N.

     A.M. Volkov; obituary. Izv. AN SSSR Ser.geog. no.6:106-107 N-D '54.
          (Volkov, Aleksandr Mikhailovich, 1890-1954)   (MIRA 8:3)

VITYAZEVA, V.A.

VITYAZEVA, V.A.

Conference on the over-all unilization of the natural resources
of Ukhta. Izv. AN SSSR. Ser. Geog. no.3:145-148 My-Je '57.
            (Ukhta--Natural resources)   (MIRA 10:12)

VITYAZEVA, Valentina Aleksandrovna, ; MEZENTSEV, . ., red.; TSIVUNIN, I.,
tekhn.red.

[Main problems in developing the productive forces of the
Komi A.S.S.R. in the seven-year plan] Osnovnye problemy raz-
vitiia proizvoditel'nykh sil Komi ASSR v semiletke. Syktyv-
kar, Komi knizhnoe izd-vo, 1960.   27 p.

(MIRA 14:5)

1. Zaveduyushchiy otdelom ekonomiki Komi filiala AN SSSR (for
Vityazeva).
   (Komi A.S.S.R.--Industries) (Komi A.S.S.R.--Economic policy)

ALAMPIYEV, P.M.; VITYAZEVA, V.A.; LISTENGURT, F.M.; MAKSAKOVSKIY, V.P.;
    POKSHISHEVSKIY, V.V., prof.; SOLOV'YEVA, M.G., dotsent;
    LYALIKOV, N.I., dotsent, red.; ZAK, A.L., tekhn.red.

[Economic geography; toponymy. Collected articles] Ekonomicheskaia
geografiia: Toponimika; sbornik statei. Moskva, 1960. 169 p.
                                                (MIRA 14:2)

1. Moscow. Moskovskiy gosudarstvennyy pedagogicheskiy institut.
Geografo-biologicheskiy fakul'tet.
              (Geography, Economic)
          (Europe, Eastern—Names, Geographical)

VITYAZEVA, V.A.

Problems concerning comprehensive utilization of natural re-
sources in the Komi A.S.S.R. Izv.AN SSSR.Ser.geog. no.3:55-61
My-Je '60.   (MIRA 13:6)

1. Komi filial AN SSSR.
              (Komi A.S.S.R.—Industries)

VITYAZEVA, V.A.

Main problem of the industrial development of the near North.
Izv. Komi fil. Geog. ob-va SSSR no.9:5-16 '64.

(MIRA 18:5)

VITYAZEVA, V.A.

Economic regionalization of the Komi A.S.S.R. Izv.Komi fil.
Geog.ob-va SSSR no.7:3-14 '62.   (MIRA 15:12)
               (Komi A.S.S.R.—Economic zoning)

VAVILOV, P.P.; VITYAZEVA, V.A.

The Komi Branch of the Academy of Sciences of the U.S.S.R.
Izv. AN SSSR. Ser. geog. no.6:130 N-D '61.   (MIRA 14:12)
        (Komi A.S.S.R.—Geographical research)

VITYN, IA. IA.

VITYN, IA. IA.
O pochvakh Kubanskoi oblasti, ikh proiskhozh-
denii i svistvakh. Ekaterinoslav, 1917. 46 p.
                                    DLC: S599.R9V5

SO: LC, Soviet Geography, Part I, 1951, Uncl.

VITIS, IA.IA.

VITIS, IA.IA, O pochvakh Kubanskoi Oblasti, ikh proiskhozhdinii i svoistvakh.
Ekaterinoslav, 1918---   DLC: HD9575,R6373

SO: LC, Soviet Geography, Part II, 1951, Unclassified

VITYN', YA. YA.

The origin and properties of the soils in Kuban Oblast. Ekaterinodar Izd. Kubanskago
tsentr. soiuza uchrezhdenii melkago kredita. 1918. 46 p. (50-40902)

S599.R9V5

1. Soils - Russia - Kuban (Province

VITYN'SH, YA.

Vitn'sh, Ya. "An examination of the spils of experimental establishments". Izvestiya akad. nauk Latv. SSR, 1949, No. 4, p. 21-48, (In Latvian, resume in Russian), - Bibliog: 7 items.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

VITYN'SH Ya. YA.

24822.   VITYN'SH, Ya. Ya. Pitanie Podzemnykh Vod V Svyazi S Tipami Pochv. Trudy
          Ybkeynoy Sessii, Posvyashch Stoletiy So Dnya Rozhdeniya Dokuchayeva, M. L.,
          1949 S 182-83

SO: Letopis' No. 33, 1949

VESNIN, V.V.; VIYRA, V.I.; KARTASHOV, I.P.

History of the formation of the glacial relief in the region
of Lake Jack London. Dokl. AN SSSR 147 no.3:667-670 N '62.
(MIRA 15:12)

1. Ten'kinskaya kompleksnaya ekspeditsiya Severo-Vostochnogo
geologicheskogo upravleniya i Severo-Vostochnyy kompleksnyy
nauchno-issledovatel'skiy institut Sibirskogo otdeleriya AN SSSR.
Predstavleno akademikom I.P. Gerasimovym.
(Jack London Lake region—Glacial epoch)

VITYUGIN, V.M.; FUKS, O.A.

Distribution of chromium oxide in the products of treatment of
ilmenite. Izv. TPI 126:98-101 '64.   (MIRA 18:7)

VITYUGIN, V.M.; PLOTNIKOVA, Ye.S.

Deashing of concentrates of sulfite-distiller's grain. Izv. TPI
126:102-105 '64.   (MIRA 18:7)

VITYUGIN, V. M.; PROKHOROVICH, V. A.; BOGMA, A. S.

Nodulizing iron ore concentrates with cast iron filings.
Izv. vys. ucheb. zav.; chern. met. 7 no.6:26-28 '64.(MIRA 17:7)

1. Tomskiy politekhnicheskiy institut.

VITYUGOV, A.I.

Therapeutic tactics in injuries to the meniscus of the knee joint.
Ortop.,travm.i protez. 22 no.4:73 Ap '61.   (MIRA 14:11)
                  (KNEE—WOUNDS AND INJURIES)

VITYUGOV, I.A.

Experimental observations in injury or partial or complete removal of
the meniscus of the knee joint. Ortop. travm. protez., Moskva-19 no.6:
34-36 N-D '58.   (MIRA 12:1)

1. Iz kliniki travmatologii i ortopedii (zav.- prof. L.O. Shkol'nikov)
Stalinskogo (Kemerovskoy obl.) gosudarstvennogo instituta dlya usover-
shenstvovaniya vrachey (dir. - dots. G.L. Starkov).
          (KNEE, wds. & inj.
                meniscus, partial & complete removal in sheep & dogs (Rus))

VITYUGOV, I.A.

New signs of damages to the meniscus of the knee joint.
Ortop.travm. i protez. 19 no.4:60 Jl-Ag '58   (MIRA 11:11)

1. Iz kliniki travmatologii i ortopedii (zav. - prof. L.G. Shkol'
nikov) Stalinskogo Gosudarstvennogo instituta dlya spetsializatsii
i usovershenstvovaniya vrachey im. V.I Lenina.
        (KNEE JOINT--DISEASES)

VITYUGOV, I. A., Cand Med Sci (diss) — "A new modification of the method of
arthropneumography in injuries to the menisci of the knee joint". Leningrad,
1960. 16 pp (Central Sci Res Inst of Med Radiology of the Min Health USSR),
300 copies (KL, No 10, 1960, 135)

SHKOL'NIKOV, L.G., prof.; VITYUGOV, I.A., assistent

Clinical data on cardiac and pericardial wounds. Khirurgiia 35
no.1:125-128 Ja '59.   (MIRA 12:2)

1. Iz kliniki travmatologii i ortopedii (zav. - prof. L.G. Shkol'-
nikov) Stalinskogo gosudarstvennogo instituta dlya spetsializatsii
i usovershenstovovaniya vrachey (dir. - dotsent G.L. Starkov).
          (HEART, wds. & inj.
               case reports (Rus))
          (PERICARDIUM, wds. & inj.
               same)

VITYUGOV, I.A.

Significance of arthropneumography in diagnosis of injuries of menisci of the knee joint. [with summary in English]. Vest. rent. i rad. 33 no.5:49-55 S-O '58 (MIRA 11:11)

1. Iz kafedry ortopedii i travmatologii (zav. - prof. I.G. Shkol'nikov) Stalinskogo instituta dlya usovershenstvovaniya vrachey (dir. - dotsent G.L. Starkov).
(KNEE wds. & inj.
meniscal, diag. value of arthrpneumography (Rus))

VITYUGOV, I.A.

Some cases of osteochondritis dissecans (Koenig's disease). Ortrop. travm.i protez. 21 no.3:57-59 Mr '60. (MIRA 14:3)

1. Iz kliniki travmatologii i ortopedii (zav.kafedroy - prof. L.G. Shkol'nikov) Stalinskogo (Kemenovskoy oblasti) instituta usovershen-stvovaniya vrachey (dir. - dotsent G.L.Starkov).
(OSTEOCHONDROSIS)

VITYUGOV, I.A.

Accidents among machine couplers. Ortop.travm. i protez. no.3:71
My-Je '55.   (MLRA 8:10)

1. Iz kliniki ortopedii i travmatologii (zav.prof. L.G.Shkol'nikov)
Stalinskogo (Kemerovskoy obl.) instituta usovershenstvovaniya
vrachey dir.prof. A.N.Araviiskiy)
        (AGRICULTURE,
            accid. in tractor trailer workers)
        (ACCIDENTS,
            in tractors trailer workers)

VITYUGIN, V.M.; ATKHIN, G.F.

Wood pitch as a binder for coal briquetting. Gidroliz.i lesokhim.prom.
12 no.2:7-9 '59.   (MIRA 12:3)

1. Tomskiy politekhnicheskiy institut.
                (Wood tar) (Briquets (Fuel))

SHKOL'NIKOV, L.G., prof. (Novokuznetsk, Kemerovskoy oblasti, prospekt
        Metallurgov, d.34, kv.27); VITYUGOV, I.A., kand. med. nauk;
        ROSTOVSKAYA, M.P.

Surgical treatment of ruptures of the cruciform ligaments of
the knee joint. Ortop., travm. i protez. 25 no.6:16-21 Je '64.
                                        (MIRA 18:3)

VITYUK, A.N.

Approximate integration of systems of ordinary differential equations based on S.A. Chaplygin's method. Dif. urav. 1 no.7:923-928 Jl '65.   (MIRA 18:8)

1. Odesskiy gosudarstvennyy universitet imeni I.I. Mechnikova.

L 00315-66   EWT(d)   IJP(c)

ACCESSION NR: AP5019616

UR/0376/65/001/007/0923/0928

AUTHOR: Vityuk, A. N.

TITLE: On the approximate integration of systems of ordinary differential equations by the Chaplygin method

SOURCE: Differentsial'nyye uravneniya, v. 1, no. 7, 1965, 923-928

TOPIC TAGS: ordinary differential equation, approximation method, Cauchy problem

ABSTRACT: A method is proposed for the construction of an approximate solution for the system

$$y_i' = f_i\,[y] = f_i(x,\ y_1,\ y_2,\ \ldots,\ y_n),\quad (i = 1,\ 2,\ \ldots,\ n) \qquad (1)$$

under the initial conditions

$$y_i\,(x_i) = y_{i0}, \qquad (2)$$

where y_{i0} are arbitrary constants and $x_i \in (a,\ b)$. Sequences for the solution are constructed on the basis of a theorem due to Chaplygin on differential inequalities for the equation $y' = f(x,\ y)$, and they are proved to converge uniformly to the

Card 1/2

L 00315-66

3

ACCESSION NR: AP5019616

solution of (1), (2). Orig. art. has: 37 formulas.

ASSOCIATION: Odesskiy gosudarstvennyy universitet imeni I. I. Mechnikova
(Odessa State University)

SUBMITTED: 20Feb65   ENCL: 00   SUB CODE: MA

NO REF SOV: 005   OTHER: 000

Card 2/2

VITYUK, A.N. [Vitiuk, O.N.]

Upper and lower bound approximations to the solution of systems
of ordinary differential equations of the first order unsolved
with respect to the derivatives. Dop. AN URSR no.3:284-287 '65.
(MIRA 18:3)

1. Odesskiy gosudarstvennyy universitet.

LANSKAYA, L.A.; VITYUK, D.M.; ROZHANSKAYA, L.I.

Some data on the chemical composition of marine planktonic algae
cultivated under artificial and natural illumination. Trudy SBS
17:346-350 '64.   (MIRA 18:6)

VITYUK, D.M.

Methods of determining the raw fat in plankton. Trudy SBS 17:
304-308 '64.   (MIRA 18:6)

VITYUK, D. M.

3

The drop error in microtitration. D. M. Vityuk. Trudy Krym. Filiale Akad. Nauk S.S.S.R. 4, Nos. 1,01-6(1953).— To reduce the drop size of the titrant and therefore the error in microtitrations, the rate of flow through the buret toward the end of the titration was decreased and small amts. of an indifferent substance that lowered the surface tension were added to the titrant. Thus, addn. of approx. 0.1% Na oleate practically eliminated the drop error in the microtitration of a Ag soln. with NH₄CNS. Gary Gerard

CH

VITYUK, K., kand.tekhn.nauk

Compensation of reactive loads of harbor cranes. Rech. transp.
20 no.8:16-19 Ag '61.
(Electric cranes)
(MIRA 14:10)

VITYUK, K.T., kand.tekhn.nauk

Some problems of the most efficient use of using diesels in diesel-electric propeller units. Trudy LIIVT no.26:231-235 '59.
(MIRA 14:9)

(Ship propulsion) (Diesel engines)

VITYUK, K.T., dotsent, kand.tekhn.nauk

Determining the power on the terminals of electric motor according to the degree of loading of the actuating mechanism. Izv.vys.ucheb.zav.; energ. 3 no.5:54-59 My '60. (MIRA 13:6)

1. Leningradskiy institut vodnogo transporta. Predstavlena kafedroy elektrifikatsii promyshlennykh predpriyatiy i ustanovok.

(Electric motors)

VITYUK, K.T., kand. tekhn. nauk, dotsent

Standardizing the control systems of portal and floating cranes. (MIRA 18:10)
Trudy LIVT no.71:508 '65.

VITYUK, K. T.

Vityuk, K. T.

"Automatic regulation of the power circuit of diesel electric paddle-wheel mechanisms of inland shipping vessels." Min River Fleet USSR. Leningrad Inst of Water Transport Engineers. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnaya letopis'
No. 25, 1956. Moscow .

SELIVERSTOV, V.M., kand.tekhn.nauk; VITYUK, K.T., kand.tekhn.nauk

Automatic control system of an auxiliary boiler on the
motorship "Kazbek." Trudy LIVT no.10:45-56 '61.   (MIRA 14:9)
   (Boilers, Marine)   (Automatic control)

KOVALENKO, G.D., agronom po zashchite rasteniy (Cherkasskiy rayon);
     TSURA, A.A., agronom po zashchite rasteniy (Chigirinskiy rayon,
Cherkasskoy oblasti); VITYUK, S.A., agronom po zashchite rasteniy
(Litinskiy rayon, Vinnitskaya obl.); BRUNNER, Yu.N., kand.biolog.
nauk (Poltava); KRUGLOVA, M.G., agronom po zashchite rasteniy
(Poltava)

From the practices in controlling the pea weevil. Zashch.rast.ot
vred. i bol. 7 no.4:9-13 Ap '62.   (MIRA 15:12)
                    (Pea weevil—Extermination)

VITYUK, S.A., agronom po zashchite rasteniy

Organize the protection of private orchards. Zashch.rast.ot vred.
i bol. 3 no.6:28-29 N-D '58.   (MIRA 11:12)

1.Litinskaya mashinno-traktornaya stantsiya, Vinnitskaya oblast'.
  (Fruit--Diseases and pests) (Spraying and dusting)

VITYUKOV, V., kapitan, komandir brigady

Toward new frontiers. Voen. vest. 41 no.7:9 Jl '61. (MIRA 15:1)

(Artillery, Field and mountain)

VITYUKIN, B.T.

PHASE I BOOK EXPLOITATION   807/039

Sovetskaya antarkticheskaya ekspeditsiya, 1955-

Pervaya kontinental'naya ekspeditsiya 1955-1957 gg.: nauchnye rezul'taty. (First Continental Expedition, 1955-1957; Scientific Results) Leningrad, Izd-vo "Morskoy transport", 1959. 161 p. 2,000 copies printed. (Series 1 to Material, tom 2)

Sponsoring Agency: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

Ed.: M.M. Somov, Doctor of Geographical Sciences; Tech. Ed.: L.P. Brusnikina.

PURPOSE: This book is intended for polar specialists, geographers, geologists, meteorologists, and geophysicists.

COVERAGE: This book is Volume 2 of a multivolume work containing scientific data collected by the First Soviet Continental Expedition to the Antarctic (1955-57), sent out under the auspices of the Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute) as part of the IGY program. The purpose of the expedition was to survey an area between 74 to 110°E longitude and 65 to 70°S latitude (an area of about 1 million square kilometers), to develop methods and techniques for field studies applicable to local conditions, and to initiate a systematic study of the natural phenomena of the region. Ground and aerial observations were conducted in the more interesting areas around and between Mirnyy and Pionerskaya, in the three areas of Oazisnyy, Bunger, and Vostokiko on the Shackleton Ice Shelf; Drygalski Island, and a series of stations (Pionerskaya, Oazis, etc.), Geological, geographic, and geophysical observations were made in the Mirnyy Observatory and at the Pionerskaya and Oazis research stations. No personalities are mentioned. There are 29 references.

Gusev, A.M. and N.P. Rusin. Meteorological Characteristics of the Glacier   66
Nipe of East Antarctica

Vilenskiy, V.D., P.D. Koltyakin, A.P. Kapitsa, Yu.N. Model', Contemporary   73
Ice Cover of East Antarctica and Its Dynamics
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Koptev, Ya.A Ice Regime of the Davis Sea and Adjacent Regions of the   93
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Korotkevich, Ye.S. Biogeographic Characteristics of the Expedition's Area of   104
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Region of Mirnyy

Brylinskiy, A.D. Seismic Observations in Mirnyy   153

Pchelyar, N.F. Medical Studies in East Antarctica   157

AVAILABLE: Library of Congress (G860.S58)

(2)

VITYUTNEV, O.I., inzh.

Supply cars with brake platforms. Bezop.truda v prom. 1 no.10:33-34
O '57.
(MIRA 10:11)

1. Dzhezkazganskoye rudoupravleniye.
(Conveying machinery)

VITYUTNEV, P.I., gornyy tekhnik.

Our complaints about electric locomotive designers. Bezop.truda
v prom. 1 no.8:38 Ag '57. (MLRA 10:8)

1.Dzhezkazganskoye rudoupravleniye.
(Electric locomotives)

SHINKARENKO, M.I., inzh.; VITZON, A.A., inzh.

Modernization of rolling mills. Mashinostroenie no.2:28-29
Mr-Ap '65.

(MIRA 18:6)

B-III-1

BC

Chlorosis of fruit plants. S. Vinkov (Proc. Conf. Soil Sci., Saratov, 1937, 2, 343—344).—Chlorosis occurs in plants growing in soils with a high content of insolubly admixed $CaCO_3$; it is due to conversion of soil Fe into insol., unassimilable compounds. The condition is aggravated by factors raising the alkalinity of the soil, and relieved by those raising its acidity. Plants having acid root secretions (notably Convolvulus arvensis) are immune to chlorosis.   R. T.

METALLURGICAL LITERATURE CLASSIFICATION

SVYATUKHIN, M.V.; BODAREV, A.A.; VIUNSKOVSKIY, D.N.

Effect of dextran on the development of edema in burned tissues and
on hemoconcentration in extensive burns. Probl. gemat. i perel. krovi
5 no. 4:39-44 Ap '60.   (MIRA 14:1)
          (BURNS AND SCALDS) (DEXTRAN)

V'IUSHKOV, P. V.

V'iushkov, P. V.   "The Elastic Static Gravimeter."   Trudy Instituta Geologii Sara-
tovskogo Gosud. Universiteta, vol. 2, No. 2/3, 1939, p. 290-294.

VIVADA, Marjan.

"The Yugoslav trade unions are coming out for international solidari-
ty." Vsem.prof.dvizh. no.4:9 Ap '56.   (MLRA 9:8)

1. Chlen sekretariat TSentral'nogo soveta Soyuza profsoyuzov
Yugoslvii, na IV s"yezde Vseobshchey ital'yanskoy konfederatsii
truda.

                    (Yugoslavia--Trade unions)

VIVAL'KO, I.G.

Effect of organic and mineral fertilizers on the crop, accumulation
and yield of rubber, of kok-saghyz. Dop.AN URSR no.3:51-58 '49.
(MIRA 9:9)

1.Institut fiziologii roslin i agrokhimii AN URSR. Predstaviv diysniy
chlen AN URSR O.I.Dushechkin.
(Kok-Saghyz)

VIVALKO, I. G.; SHILOV, YE. A.; YASNIKOV, A. A.

"Mechanism of rubber and carotene biosynthesis."

report submitted for the IUPAC 2nd International Symposium on the Chemistry of Natural products, Prague, Czech., 27 Aug – 2 Sep 62

CA VIVAL'KO, I. G.

IID

Carbohydrate exchange in kok-saghyz. I. G. Vival'ko. *Dopovidi Akad. Nauk Ukrain. RSR* 1950, No. 1, 81-4.— Carbohydrates were detd. in leaves and roots of the kok-saghyz plant of the Natashin variety during the vegetative period of 1948. The total carbohydrate content in leaves reached a max. (30.72%, hydrate wt. of leaf) on July 31, then fell to 13.06% by Sept. 6. Glucose (I) and fructose (II) were the main monosaccharides, I predominating. I also predominated in the hydrolysis mixts. from the hydrolyzable sugars. The carbohydrate content of roots reached a max. (51.54%) on July 31, and remained essentially const. thereafter. The inulin content started at 0.90% (July 10), reached a max. of 30.51% by Sept. 6, and dropped to 28.12% by Sept. 26. Roots contained little, if any, monosaccharides. Among polysaccharides were ab-, tri-, and other polyfructoses and some sucrose. It is indicated that the inulin and other sugars in roots are interdependent.   Morris Sankin

VIVAL'KO, I.G.; KOVALENKO, G.P.; LEPPIK, L.A.

Effect of various nitrogen fertilizers on the increase of flax
productivity. Dop.AN URSR no.6:556-559 '55.   (MIRA 9:7)

1.Institut fiziologii roslin ta agrokhimii AN URSR. Predstaviv
diyaniy chlen AN URSR O.I.Dushechkin.
            (Ukraine--Flax) (Fertilizers and manures)

VIVAL'NYUK, L. N. Cand Phys-Math Sci -- (diss) "Significance of the activity of a professor of the University of Kiev, Academician D. A. Grave,in the development of algebra in the Soviet Union." Kiev, 1960, 14 pp, (Society of the Scientific Council of the Institutes of Mathematics, Physics, and the Physics of Metals of the Acad Sci U:SSR), 250 copies, (KL, 31-60, 140)

L 26027-66 EWT(m) JL/JG

ACC NR: AP6012775

SOURCE CODE: UR/0226/66/000/004/0069/0073

AUTHORS: Verkhoglyadova, T. S. (deceased); Vivchar, O. I.; Gladyshevskiy, Ye. I.

ORG: Institute for the Study of Materials, AN UkrSSR (Institut problem materialovadeniya AN UkrSSR); L'vov State University im. I. Franko (L'vovskiy gosudarstvennyy universitet)

TITLE: Solubility of transition metal disilicides in molybdenum and tungsten disilicide

SOURCE: Poroshkovaya metallurgiya, no. 4, 1966, 69-73

TOPIC TAGS: molybdenum compound, tungsten compound, transition element, phase diagram

ABSTRACT: The phase diagrams of the binary systems $MoSi_2$ - $ReSi_2$ and WSi_2 - $ReSi_2$ and the ternary system $MoSi_2$ - WSi_2 - $MeSi_2$ (where Me = Ti, V, Nb, Ta, or Cr) were determined. The nature of the solid phase was determined by x-ray and microstructural methods. The experimental results are presented in graphs and tables (see Fig. 1). The system $MoSi_2$ - $ReSi_2$ exhibits a continuous series of solid solutions, and the systems WSi_2 - $ReSi_2$ and $MoSi_2$ - WSi_2 - $ReSi_2$ show unlimited reciprocal solubility. The systems $MoSi_2$ - WSi_2 - $MeSi_2$ show only limited solubility in the solid state. It is concluded that the greater solubility of disilicides in WSi_2 as compared with
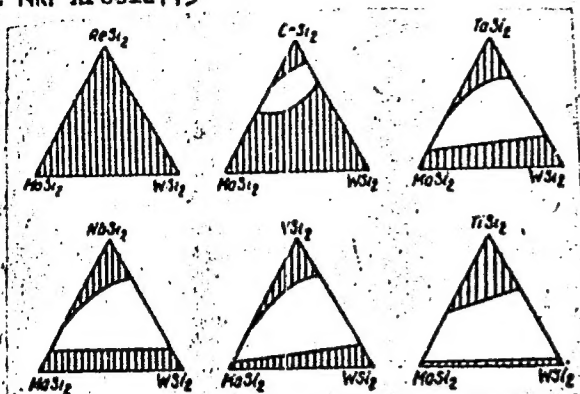
Card 1/2

L 26027-66

ACC NR: AP6012775

Fig. 1. Regions of solid solution formation in the ternary systems $MoSi_2$ – WSi_2 – $MeSi_2$, temperature 1400C.

$MoSi_2$ is associated with the decreased stability of the d-electronic level in W atoms. Orig. art. has: 1 table and 5 figures.

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Card 2/2

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L 43847-65   EWT(1)/IWP(m)/EWT(m)/EPF(c)/EPA(w)-2/-   Pd-1/Pab-10/Pr-4   RWH/WG

TE/0170/65/008/014/0445/0446

AUTHORS: Vivdenko, M. I.; Shabalin, K. N.

TITLE: On the mechanism of decay of a jet into coarse droplets

TOPIC TAGS: fluid jet, water jet, decomposition, jet simulation

ABSTRACT: The break-up or decay of a water jet into large drops was studied by means of an 1050-frame-per second high-speed camera. The water jet was 30×10^{-3} m
[...] speed of 1.07 m/second.
[...] contractions and bulges are [...] effects